

## **REMARKS**

As of the mailing date of the pending office action, Claims 1-13, 17, and 19-21 were pending in this application. Of these pending claims, Claims 11-13 and 17 stand rejected; and Claims 1-10 and 19-21 stand withdrawn. By way of this paper, Claims 12 and 13 have been amended; Claims 1-11, 17, and 19-21 have been cancelled; and new Claims 22-29 have been added.

The foregoing amendments and following remarks are believed to be fully responsive to the outstanding office action, and are believed to place the application in condition for allowance.

### **Response to Office Action**

Although the office action summary indicates that the pending office action is final, Applicant is proceeding under the assumption that the pending office action is non-final because the pending office action is the first office action received by Applicant after the filing of an RCE. Additionally, the pending office action presents new prior art rejections when compared to the final office action mailed January 25, 2005. If this assumption is incorrect, the Examiner is asked to contact Applicant's representative prior to mailing an Advisory Action, in the event mailing of an Advisory Action is deemed necessary by the Examiner.

### **Claim Rejections – 35 U.S.C. § 112, first paragraph**

Claims 11-13, and 17 stand rejected under 35 U.S.C. §112, first paragraph, as being failing to comply with the written description requirement.

By way of this paper, Claims 11 and 17 have been cancelled. Claims 12 and 13 have been amended such that each claim now depends from new Claim 22. As such, Applicants respectfully submit that the 35 U.S.C. §112, first paragraph, rejection of Claims 11-13, and 17 is now moot. Accordingly, Applicant requests reconsideration and withdrawal of the 35 U.S.C. §112, first paragraph, rejection of Claims 11-13 and 17.

### **Claim Rejections – 35 U.S.C. § 103**

Claims 11-13, and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Lam et al. ('971) reference in view of the Roos ('610) reference.

By way of this paper, Claims 11 and 17 have been cancelled. Claims 12 and 13 have been amended such that each claim now depends from new Claim 22. As such, Applicants respectfully submit that the 35 U.S.C. §103(a) rejection of Claims 11-13, and 17 is now moot. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of Claims 11-13, and 17 is requested.

**Additional Claim Amendments**

Claims 1-10, 19, and 20 have been cancelled by way of this paper. However, Applicant reserves the right to continue prosecution of these claims in a divisional application filed at a later date.

Claim 21 has been cancelled by way of this paper. A review of the file history of this application appears to indicate that claim 21, having a status identifier of withdrawn, was inadvertently added to the response filed by Applicant on October 27, 2004.

New Claims 22-29 have been added herein.

One of the problems solved by Applicant's invention is the reduction or elimination of delamination of an electroformed structure from a metallic substrate (a substrate coated with a metal layer) used to build it, as described in paragraphs 0005, 0016, and 0017 of the application publication (US 2003/0143492 A1) corresponding to Applicant's invention. As the electroformed structure contacts the metal layer coated on the substrate, delamination actually occurs between the metal layer and the electroformed structure, and not the metal layer and the substrate.

Applicant has solved this problem by providing a mandrel including a metal layer having improved adhesive properties relative to the electroformed structure. However, the electroformed structure still needs to be removable from the substrate. Therefore, Applicant has also provided a release layer, positioned between the substrate and the metal layer, having adhesive properties sufficient to hold the metal layer to the substrate while still allowing the electroformed structure and the metal layer to be removable from the substrate.

As such, independent Claim 22 describes a mandrel including an sacrificial controlled-release layer having an adhesive bond associated with a substrate base; and a conductive metal layer having an adhesive bond associated

with a three dimensional electroformed structure with the adhesive bond between the conductive metal layer and the three dimensional electroformed structure being stronger than the adhesive bond between the sacrificial controlled-release layer and the substrate base such that the three dimensional electroformed structure is removable from the substrate base before being removable from the conductive metal layer. Support for this feature can be found in at least paragraph 0018 of the application publication (US 2003/0143492 A1). Applicant submits that the prior art described above does not disclose this feature of Applicant's invention.

In this respect, Applicant submits that the Lam et al. ('971) reference discloses a metallic substrate (FIG. 1B; stainless steel layer 1-5, chrome layer 1-11, and substrate 1-7 (either glass, polished silicon, or plastic, col. 3, lines 16-18)). The metal layer (stainless steel layer 1-5) bonded to the substrate by the adhesive layer (chrome layer 1-11) is a passive (passivated) metal layer. As such, Applicant submits that the Lam et al. ('971) reference describes a prior art mandrel having the problem solved by Applicant's invention, that is, delamination between the electroformed structure and the metal layer of the mandrel, as described in paragraphs 0005, 0016, and 0017 of the application publication (US 2003/0143492 A1).

The Roos ('610) reference discloses a photoresist having improved adhesion properties (Abstract). However, delamination actually occurs between the metal layer and the electroformed structure, and not between the metal layer and the substrate. As such, one of ordinary skill in the art would not be motivated to substitute the adhesive layer (chrome layer 1-11) disclosed by the Lam et al. ('971) reference with the photoresist disclosed by the Roos ('610) reference because doing so would not improve the adhesion of the metal layer to the electroformed structure. Instead, the adhesive bond between the metal layer and the substrate would be improved. Therefore, even if one of ordinary skill in the art were motivated to substitute the adhesive layer (chrome layer 1-11) disclosed by the Lam et al. ('971) reference with the photoresist disclosed by the Roos ('610) reference, the resulting product would still have the delamination problem described above. Claims 12, 13, and 23-29 depend from independent Claim 22. Accordingly, Applicant requests allowance of Claims 12, 13, and 22-29.

**CONCLUSION**

It is respectfully submitted that, in view of the above amendments and remarks, this application is now in condition for allowance, prompt notice of which is earnestly solicited.

The Examiner is invited to call the undersigned in the event that a phone interview will expedite prosecution of this application towards allowance.

Respectfully submitted,

  
\_\_\_\_\_  
Attorney for Applicant(s)  
Registration No. 45,287

William R. Zimmerli/tt  
Rochester, NY 14650  
Telephone: (585) 588-2758  
Facsimile: (585) 477-4646

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.